

EVOLUTION AND MYSTERY IN THE DISCOVERY OF AMERICA.

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It is usually supposed that the American continent was revealed to Europeans by an incident known as the discovery of America. This is assumed to have taken place almost with the unexpectedness and rapidity of a stroke of lightning or the breaking of an egg. The reality, however, is quite different. The opening up of the North and South American continents to the white races of Europe is due to a long series of events and movements, that is to evolution, and not to a single occurrence ideally fathered in one individual's brain and which his genius brought from an ideal stage into a concrete matter of fact one. Not only was it a process of evolution which made known the New World to the Old World, but it was an evolution so long drawn out that it was entirely unnoticed at the time and as a result many of its steps are forgotten and much of it is most hazy. Indeed the most salient point in regard to the recognition by Europeans of the existence of the American continent is that it is an evolution veiled in mystery.

All geographical discovery indeed is an evolution and this evolution proceeds from many causes. One of them is the movement and migrations of peoples. People slowly filter into lands new to them, discovering as they go new sites in which to hunt and in which later to dwell. They are not on the outlook for discoveries proper, they are not searching to penetrate the secrets of the unknown: they are merely seeking new spots in which to live, because for some reason they are driven out of their former homes. Overpopulation it may be, or the drying up of the water supply and the destroying of the soil by cutting down the forests, or some other cause; but whatever the cause something impels certain peoples

to move into fresh fields and pastures new and by so doing they open up new lands and new waters.

The most potent cause acting on the individual to make him a geographical explorer is the fascination of the unknown. Some men seem impelled by the spirit of curiosity to pry into things hidden from their ken. When more highly developed this changes into the spirit of research and those smitten by it delve into the unknown with the scientific purpose of adding to the sum of human knowledge. In some men this spirit manifests itself in trying to unveil the untouched parts of the earth, seas or lands, even if merely some small untrodden mountain peak, to which the fascination of the unknown lures them on with irresistible appeal.

As a sequel to this, though in lesser degree, a good deal of exploration is due to the desire for adventure or sport which some men are imbued with. Without any special curiosity to seek new parts of the earth, they are driven by their nature to hunt or to fish. And in their wanderings carried out to gratify other tastes, incidentally frequently they make geographical discoveries which later comers complete and verify.

An extremely active and effective agent in bringing about knowledge of the surface of the earth is commerce. Peoples search for greater food supplies; they search for new countries from which to bring home useful products; they search for new markets in which to sell their own productions. Merchants put up the cash and sea captains and sailors start off to make that cash fructify. Many voyages have been made in past centuries in which geographical discovery was entirely secondary to commercial gain and yet in the pursuit of the latter some rich prizes in exploration have fallen to traders who cared but little for them. Some men have sought new fishing grounds; others have followed fur-bearing animals; others again have gone to enslave their fellow men. Sometimes successful, sometimes unsuccessful in their quests, these men, in a purely accidental way, have revealed many a new land or sea to their fellows.

What we know of past geographical discovery depends mainly on two sets of evidences: written records and maps. A trifling part

of it depends on archeological evidence and another on tradition. The most important evidences are: the narratives of travelers themselves or the accounts written of travelers by their contemporaries; maps. In many cases a map is the only record. It delineates a land or a sea of which there is no written account dating back as far as the date of the map. And when one finds on a map some earth feature correctly placed and even if one knows nothing of its discovery or its discoverer, it is difficult to refuse to recognize that that particular bit of the world had been seen and reported by some perhaps forgotten person. Maps in fact are something like portraits. A genuine portrait is hard to deny. So valuable as identifications are photographic portraits, that now they are placed on passports in some countries. If at all accurate, maps are among the most uncontrovertible evidences of geographical discovery. And it is precisely on maps that many of the riddles connected with the unfolding of the geography of the American continent are presented.

The earliest European invaders of the American continent found it tenanted by native races. Who were these races and when and where did they come from? While no positive answer can be given to these questions, yet we know now that our American natives have been here a long, long time, and that they had been acted on by the force of evolution for many millenniums before the white race came to contest with them the ownership of the lands stretching from Grant Land to Tierra del Fuego. The ancestors of our historic Indians and of our present Eskimo were, of course, the real original inhabitants of America, but when and how they became so is at present unknown to us. Were they autochthones? We do not know! Or did they wander in from Asia? Again we do not know! But if they did the latter, and it certainly seems the most probable, then they spread over the American continent by migration and, in a certain sense therefore, were its original discoverers.

The evolution of the European invasion of America, as far as accessible records show, begins in early historic times. Between the years 1000 and 500 B.C., some Phœnicians circumnavigated

Africa. They started from Egypt, went down the east coast of Africa, rounded the Cape of Good Hope, and returned via the west coast of Africa and the Straits of Gibraltar. Their chronicler, Herodotus, unfortunately gives them a very meager notice. Nevertheless theirs was the first historic voyage on the Atlantic Ocean and the first recorded step leading to the discovery of America by the peoples of Europe.¹

The next attempts at exploration in the Atlantic of which we have any record are the journeys of the Carthaginians Hanno and Himilko. Hanno sailed from Carthage about 500 B.C., passed through the Straits of Gibraltar and turned south along the African coast. He reached a country where he found hairy men with some of whom he had fights in which he killed three whose skins he brought back to Carthage where they long hung in one of the temples. These hairy men are by some writers surmised to have been chimpanzees or gorillas. At about the same time as Hanno, Himilko is said to have made a journey beyond the columns of Hercules, to have turned north and to have reached a land where there was much tin. This probably was Great Britain. The Phœnicians, however, may have known more about the Atlantic than has come down to us in any record, for it is said that coins from Carthage and other towns in North Africa have been found on the island of Corvo, the most westerly of the Azores.

The fourth recorded journey of exploration in the Atlantic is the voyage of Pytheas. A Greek, of Massilia (Marseilles), he sailed through the Straits of Gibraltar about 350 B.C., turned north and reached the shores of Britain. Along these he sailed far to the north, until he arrived in a region where a sort of thickening of the elements, which he said resembled a marine lung, filled all space. It is surmised that he had reached the rains and fogs of northern Scotland and perhaps of the Orkneys and Shetlands, a surmise the more probable as he speaks of the sun dipping under the horizon for only a short time.

¹ A few references are given with this paper in regard to facts only lately brought into prominence. For the other facts mentioned, references by the hundred may be found in Edouard Charton's "Voyageurs Anciens et Modernes"; in Justin Winsor's "Narrative and Critical History of America"; and in the works of A. E. Nordenskjold and Henry Harrisse.

The Romans, through Julius Cæsar's conquest of Britain, made a step forward by clearing up the geography of the British Isles. After their departure, when Britain proper went into anarchy, for several centuries Ireland remained in a decidedly advanced state of culture. Ireland also is the most westerly outpost of Europe. These two factors combined lend authority to the statement in one of the Norsk Sagas that when the Vikings first reached Iceland in the ninth century A.D. they found some Irishmen settled there. The importance of this is obvious. Iceland is much nearer to America than it is to Europe. From a navigator's point of view it is an American island. Any people who reached Iceland was bound sooner or later to reach America. And effectively in another of the Norsk Sagas, there is a mention of a Great Ireland far in the west, which may refer to Greenland. But while it is impossible to say exactly what the Irish did do or where they got to, it is nevertheless unquestionable that they forged an important link in the evolution of the discovery of America. Indeed their discovery of Iceland seems to warrant considering them the first European discoverers of an American land.

The Norsemen or Vikings it was who first made recorded explorations beyond Iceland, which they reached by the ninth century A.D., and where they settled, lived and quarrelled. They left semi-historic and semi-poetic narratives, the Sagas, of some of their doings and from these we can glean a good deal about their explorations which if not historically accurate, is at least too accurate not to be based on actual facts. It was some time before the year 1000 A.D. that one of the Vikings reached Greenland. Did he sight Greenland from Iceland, which is said to happen occasionally in the clearest weather? At any rate a certain Gunnbiorn is claimed to have sighted Greenland before 900 A.D. Or did the first discoverer have a quarrel and was he driven out of Iceland? There is a story to that effect about Eric the Red, who is believed to be the first Norseman who actually landed on the shores of Greenland. He was followed by his son Leif Ericson, by Bjarni Herjulfson, by Thorfinn Karlsefni, and others. Settlements were formed in Greenland and further voyages were made to Markland, to Hellu-

land and to Vinland. All these places were real, were genuinely reached, but unfortunately their location is uncertain. Some writers think the Vikings reached Labrador and Newfoundland; others think they got as far as Cape Cod; and to this view I am myself inclined. But from the evidence, the most southern locality reached by the Vikings can not be positively identified.

But in Greenland the Vikings left positive traces of their sojourn in the shape of ruins. Some of these are the remains of churches, and it is known that there were missionaries and religious men among them. And towards the years 1100-1200 A.D., there is no doubt that there was intercourse between the Greenland settlements and Iceland. Slowly however, darkness settles over the Greenland Vikings. Did they all come back: did they die out: or did they migrate to the West? We do not know. Only a few years ago, some rather light-haired Eskimo were found near Coronation Gulf and were surmised to be descended partly from the Greenland Vikings. At any rate these latter were gradually forgotten in Europe, where Greenland remained on the maps, however, as a peninsula attached to Northern Norway, for instance in a map of 1368 and in the Ptolemy of 1486. All this is hazy, it is mysterious, but nevertheless it is certain that the Norse Vikings were genuine European invaders of the New World.

One tale there is that about 1170 A.D. a Welsh chieftain, by the name of Madoc, reached the coast of North America. This legend is unsupported by any evidence save that there is a similarity between some half a dozen Welsh and American Indian words, and this evidence is so perfectly flimsy, that it seems safe to relegate a Welsh discovery of America to the realm of fairy stories.

It was not, however, the voyages of the northern Vikings, it was the voyages of the Portuguese, Spaniards and English, which led to the peopling of the American continent by the European races. While striving to reach the East Indies by sailing west, the hardy mariners from southern and western Europe found the way barred by the West Indies or New World. Already in the fourteenth century, it is said as early as 1350, the Portuguese began to make gradually lengthening voyages to the islands off the north-west

coast of Africa. Why did they do so? It seems as if there were several causes. Of course there was the fascination of the unknown, the joy of discovery, but undoubtedly the main cause was commercial. And this commercial impetus apparently was due to the Crusades and to the invasion of Europe by the Turks. For those wars, in which Christians and Moslems smashed each other's heads for the glory of God as they still only yesterday were doing in the Balkans, blocked the commerce of Venice with the East and led the Portuguese and the Spaniards to seek a way around Africa to obtain the spices of India. Thus although the great Portuguese explorations were not wholly due to the blocking of the Oriental trade routes by the Turks, still they must have been so to some extent. And, in certain respects therefore, the invasion of America by the Europeans must be considered as a result of the invasion of Europe by the Turks.

The lost Atlantis also must have helped to arouse the curiosity of medieval seamen. For the account given in Plato that a great island or continent had been destroyed in past millenniums was certainly known in the Middle Ages. Atlantis was then supposed to be in the Atlantic Ocean, whose name not impossibly is connected with that of the island, and some early navigators may easily have had it in mind in searching for new lands or islands. It was indeed not until A.D. 1909, that a real foundation for the Atlantean tale was offered, when some thoughtful person suggested in an anonymous letter to an English newspaper that the lost Atlantis of Plato was Minoan Crete. And certainly Plato's story answers in many respects to Minoan Crete and its destruction as revealed by archeology, and in an article "Atlantis or Minoan Crete,"² I tried to explain Plato's narrative by comparing it with Minoan Cretan and Greek history and mythology. One point, however, namely the statement that the sea around Atlantis had become unnavigable, remained very dim. About this, Mr. William H. Babcock, the author of numerous scholarly and important papers about the discovery of America, in a letter to me, suggested that this might refer to the Sargasso Sea, and this certainly seems like a plausible explana-

² *The Geographical Review*, May, 1917.

tion. For if it is true that Phœnician coins have been found on one of the Azores, it is possible that some knowledge of the Sargasso Sea may have filtered into Egypt and become mixed up with the destruction of Minoan Crete. But although the story of Atlantis is so confused and so jumbled out of discordant elements that we may never feel quite sure of them all, yet as far as the discovery of America is concerned, we must remember that the belief that there had been such an island in the Atlantic and that it was close to other lands, may well have urged on some of the early Atlantic navigators.

Among the impelling causes of Portuguese discovery also, must be reckoned one man. This was the Portuguese Prince, known as Henry the Navigator. He was the son of John I., King of Portugal, and his wife Philippa, daughter of John' of Gaunt, Duke of Lancaster, and was thus half English. Born in 1394, he died in 1460, and devoted most of his life to fathering voyages of discovery. Some English writers laud him to the skies as the finest flower of chivalry, but one Portuguese writer at least claims that he was a brutal bigot and slave driver. Leaving his moral character to the tender mercies of others, history records that in June, 1415, Henry the Navigator took part in a predatory attack on the town of Ceuta, Morocco, which was wrested *vi et armis* from the Moors. Apparently his sojourn with the Moors inspired him with a desire to explore the African coast of the Atlantic Ocean and after his return to Portugal in 1418, he settled on the promontory of Sagres, Portugal, a name corrupted from its name *Sacrum* of Roman days, and built an observatory and some houses there. Here he spent most of his life, studying geography, interviewing seamen and preparing expeditions of discovery. In certain respects, the settlement of Sagres might be considered the first geographical society of the world. And although Henry the Navigator did not himself make any voyages of discovery and although none of the voyages which he fathered made known to the world the existence of the American continent, still his work aroused the interest and opened the way which eventually led to the successful voyage of Columbus. Indeed there is probably no individual who did as much to bring about the European invasion of America as Henry the Navigator.

Many of the early voyages of Portuguese or Spaniards were either unrecorded or else the records were destroyed and lost. Proof of this is shown by the fact that constantly the Portuguese and Spanish libraries and private archives yield documents revealing totally unknown circumstances. As an instance of this may be cited the case of one whole district of the island of Madeira which is called Machico, and that this was the name of a Portuguese sailor of 1379 is shown by a unique document found only in 1894.³ Of one early voyage, however, the strange invasion or conquest of the Canary Islands by the Sieur Jean de Béthencourt, a Norman French nobleman, in 1402-1405, we have an elaborate account, one copy of which in the Bibliothèque Nationale of Paris is illuminated like a missal with old drawings. But although the written records are scanty, there is no doubt that during the fifteenth century many commercial ventures and voyages of exploration into the Atlantic were made, not only by Portuguese and Spaniards, but also by Englishmen. Cape Bojador was rounded by Gil Eanes in 1435, Cape Verde in 1445 and between then and 1448 it is said that more than thirty ships sailed round it. Long voyages into the Atlantic are recorded in 1452, 1457, 1460, 1462, 1473, 1475, 1476, 1480-81, 1484, 1486. Some of these went at least 150 leagues to the west; one of them discovered or rediscovered the Sargasso Sea; all of them were in search of lands or islands in which the belief seems to have been very general. There are some rough written records of some of these voyages and they tell very fairly the evolution of discovery down the western coast of Africa.

The best records of discoveries in the western Atlantic in the fourteenth and fifteenth centuries, however, are maps. For as I have said earlier in this article, the evidence of maps is exceedingly hard to controvert. When land or sea is charted with some accuracy, even if there is no message in words about the matter, the chance is that a discovery had been made. And on these early maps of the Atlantic, the factor of especial importance in regard to America are the islands and their names.

Some names of islands persist with striking tenacity on these

³ Batalha-Reis, *The Geographical Journal*, February, 1897.

early maps. One of these names is Brazil or Brazir, which is claimed to be Irish, either a compound of the Irish Gaelic words "breas" and "ail" or to be descended from the Irish Saint Bresal. It is applied both to a small island not far west of Capè Saint Vincent, Portugal, and also to an island and sometimes to two islands in the same longitude not far west of Ireland. This northern Brazir is found on Dulcert's map of 1339, on the Catalan Atlas of 1375, etc. On the Pizigani map of 1367, there are three islands of Brazir in about the same longitude, and one of them is placed in the latitude of Brittany with two ships in distress flying the Breton flag near it. Mr. William H. Babcock,⁴ the best living authority on the subject, has suggested that this island is intended to represent Newfoundland and possibly was discovered by the Irish, and before 1367 reached also by some Breton sailors. There is one objection to this theory, however, and that is the longitude of the islands of Brazir. The northern island or islands are not far from Ireland. If any mariner had genuinely reached Newfoundland before 1367, it would seem as if he would have reported it as an island far away from Ireland. There is of course no island in the charted position, and if the latitude is correct it could be only Newfoundland. And it must be recognized that even though the longitude is incorrect yet that the latitude and the bigness of the island are decided evidence in favor of Brazir being Newfoundland. While the theory must be considered as non proven, still the evidence is sufficiently strong to prevent it from being lightly thrown aside.

There is one island or group of islands which is especially noteworthy, Antillia, from which we have made the Antilles. Some writers have sought to derive the name from Atlantis, but Mr. William H. Babcock has shown that the proper derivation comes from Anti-Ilha or Ante-Ilha, meaning the island in front of, that is to the west of the others. Originally Antillia seems to have been considered as an island to which many Portuguese are reported to have fled as a refuge when the Arabs invaded the Iberian peninsula in the beginning of the eighth century. At least there is a legend

⁴ "Indications of visits of White Men to America before Columbus," Proc. Nineteenth International Congress of Americanists, Washington, 1915.

to this effect on Martin Behaim's globe of 1492, on which it is also stated that a Spanish ship visited Antillia in 1414. In the fourteenth century the name Antillia was applied to the most westerly of the Azores. In the fifteenth century, however, several cartographers, Andrea Bianco in 1436 among others, drew maps which jump Antillia far, far to the west of the Azores. It is figured as a great big island, in about the latitude of Portugal; with another big island, Salvagio or Satanaxio, to the north of it. The main extension of Antillia and Satanaxio is about north and south, their latitude is somewheres between Florida and Massachusetts, and considering their distance beyond the Azores, their longitude would coincide roughly with the eastern coast of the United States.

Although the matter is hazy and there is no verbal evidence beyond the few words on Behaim's globe, yet the cartographical evidence shows positively that map makers of the fifteenth century had a distinct belief in big lands far west of the Azores, in about the latitude and longitude of the eastern coast of the United States. Several of these maps certainly point to extensive coasts way beyond the Azores having been reached before 1435. The name Antillia would validate rather than invalidate the reality of such a discovery. And where there is so much smoke it seems as if there must be some fire. A visit to the Antilles or to the coast of the United States before 1435 seems much less improbable than that map-makers should have correctly guessed the existence of big land masses so far to the west, which in their extension north and south and in their latitude and longitude, so closely approximate to the eastern coast of the United States. Personally I am strongly inclined to believe in the genuineness of this discovery, which may perchance have been made by the Spanish ship whereof Behaim speaks.

The most interesting and important pre-Columbian map of the Atlantic, however, without question is the Venetian cartographer Andrea Bianco's map of 1448. The problems presented by this map were broached by Dr. Yule Oldham⁶ and were admirably de-

⁶ *The Geographical Journal*, March, 1895.

veloped by Senor Batalha-Reis.⁶ Here I wish to merely recapitulate briefly the chief arguments of these scholars.

Andrea Bianco's map is on vellum 86 centimeters by 63 centimeters. It is now in the Ambrosian Library at Milan and its authenticity is generally accepted. It is one of the *portolani*, that is one of the maps made by seaman for seamen for practical purposes and free from the fanciful geographical conceptions and fabulous zoölogical monstrosities of the maps drawn by convent monks. The map takes in France, Spain and the African coast down to Cape Verde, and, as far as known, is the first record of the coast line of Cape Verde.

The remarkable feature of the map, however, is that at the extreme lower left hand corner is represented an extensive coast line southwest of Cape Verde. On this an inscription in the old Venetian dialect seems to read: "ixola otinticha xe longa a ponente 1500 mia," which may be translated: "Authentic island distant to the south west 1500 miles." The position of the coast line and the legend together seem to show that somebody, before the year 1448, had seen a land southwest of Cape Verde and some 1,500 miles distant. But there is no island in this position, while at 1,520 miles southwest of Cape Verde is the northeast promontory of South America.

There is no known account recording any voyage making such a discovery, therefore it is well to see whether there is any indirect evidence that such a discovery might have been made. In the first place there were a great number of voyages in search of lands during the fifteenth century. Then we must remember moreover that some of these voyages were not recorded and were sometimes entirely forgotten. It is, therefore, perfectly possible that such a discovery may have been made and left unrecorded if, for instance, it was made by some merchant vessel or fishing boat blown out to sea. Indeed this very thing happened in this very place in the year 1500, when Cabral's expedition, en route for India round the Cape of Good Hope, was blown out to sea and strayed over in a casual

⁶ "The Supposed Discovery of South America before 1448 and the Critical Methods of Historians of Geographical Discovery," *The Geographical Journal*, February, 1897.

sort of way to Brazil. That such a discovery was not followed up before 1492 would be simply because no one at that time could have any idea of what such a discovery meant. The land would have been looked on as another island and one too far away to be of much use.

On Martin Behaim's globe of 1492, there is a large island in the position of part of the coast of South America, in fact in the exact position given by the legend on Bianco's map of 1448.

The Treaty of Tordesillas of 1494 insured to Portugal all the eastern part of South America. Why this treaty should have been ratified unless the Portuguese already had knowledge of these lands it is hard to see. Spain claimed the lands discovered by Columbus and Portugal claimed the lands to the south probably reported by Portuguese navigators.

On the 1st of May, A. D. 1500, Master Joao, physician to D. Manuel of Portugal, wrote to the King about the land (Brazil) just found by the fleet of Cabral on board of which he was, "that those lands might the King see represented on the mappamundi which Pero Vaz Bisagudo had." He adds that the mappamundi does not mention if the land were inhabited, while he could certify it to be well peopled. He also says that the said mappamundi was ancient. This last statement is strong evidence that somebody must have seen the land before 1492.

Las Casas, writing between 1552 and 1561 about the third voyage of Columbus in 1498, says that Columbus wanted to go south because he believed he could find lands and islands, and also because he wanted to see what King D. Joao of Portugal meant when he said that there was "terra firma" to the south. The grounds for the belief of Columbus have never been explained.

The map itself and the side evidence do not make this landfall a certainty. But they certainly make it a probability. Personally the weight of evidence seems to me to lean very decidedly in favor of South America having been reached by some unknown Portuguese navigator half a century before Columbus reached American shores.

The first southern European voyage to America, however, of

which we have absolute definite historic record, is, of course, the first voyage of Columbus. This voyage it was which made known generally to Medieval Europe the existence of lands of great extent far away to the west in the Atlantic. And although the Irish reached Iceland and the Norsemen Greenland and some points of the American coast, and although some Portuguese or Spaniards probably also did the latter before Columbus, yet, to the world of Europe, Columbus was the man who kindled the torch which dispelled the darkness enwrapping the West, and in this matter at least, the popular verdict of history is correct in calling Columbus the discoverer of America. But, although we have records of his four great voyages, although we know much about Columbus, yet of many things connected with Columbus we are still ignorant.

Among the things we do not know with any certainty is why Columbus came to start on his journey. There has been much talk that he corresponded with an Italian philosopher named Toscanelli, who is said to have proved to him that by sailing westward he would find the coast of Asia. Some have claimed that a study of Marco Polo was the influencing motive of Columbus. There is a story that he met on some isle near the African coast a pilot who died in his arms and who assured him that he had sailed far across the Atlantic to distant shores. There is another tale which shows Columbus arriving at Iceland and thus hearing of the lands, already nearly forgotten in Europe, which had been the goal of the Northmen several centuries before. None of this, however, is in any respect authenticated: none of it indeed rises much beyond the status of a legend. What we do know, however, is that Columbus had the spark of exploration fever burning brightly in his heart and that it spurred him on for years until he finally won the greatest prize in the history of discovery.

Again, who actually sighted first an American land on Columbus' first voyage? Was it Columbus or one of his companions? And on what day did this happen? It is usually assumed that Columbus himself made the landfall on the 12th of October, 1492. But there is no certainty of this. The records of the voyage show that Columbus himself claimed sighting land before dawn on October 12,

but one of his sailors, Rodriguez of Tryana, put in a claim that he had seen the land in the early morning before Columbus; and another sailor on Pinzon's ship, Juan Rodriguez Bermejo, thereupon put in a claim that he had seen a sand beach reflecting the moonlight in the evening of October 11. It also happens that as the old calendar was still in use, the correct dates according to our present chronology should be some ten days later, either October 20 or October 21. And there the matter stands! We know neither who it was of Columbus's expedition who first sighted an American shore, nor do we know exactly on what day this took place. And this perforce must always remain a mystery, as the data are insufficient to clear it up.

Perhaps the queerest adjunct of Columbus's great discovery, however, is the fact that Columbus himself never knew that he had discovered a continent. Columbus till his dying breath believed that he had reached outlying parts of India. And there is one proof of this which can not be gainsaid and that is that he called the copper-colored natives whom he met Indians. To this day, we keep on repeating this error and call the original inhabitants of our continent Indians, with the result that sometimes it is hard to distinguish as to whether we are speaking of the natives of America or of the swarthy races of Hindustan. But it does seem hard that Columbus should have revealed to Europeans the existence of the vast territory extending from Bradley Land to Tierra del Fuego and yet have gone to his rest believing he had been on the shores of Hindustan.

But the very ignorance of Columbus in regard to the American continent is evidence in favor of earlier discoverers. The early maps always show islands. No one dreamed of a new continent. A mariner sighted a coast and told of it and the map-makers charted it as an island. Maps before Columbus indicated numerous islands in the western ocean corresponding roughly with parts of America. It certainly seems far more likely that these islands were based on some foundation of genuine exploration and of actual perception by early mariners than that they should have been invented correctly in cartographic workshops in Europe. Especially probable

does this seem, when one remembers that for some years after parts of the continent had been visited and portions of its coast had been charted, the explorers themselves still believed that they had merely revealed the existence of some big islands belonging to the land mass of Asia.

Mysteries thicken rather than lessen after Columbus had gone around the turning point in American discovery. The explorer who first announced that there were lands, continental in size, in the west, apparently was Amerigo Vespucci. He did so in several little tracts which are tangled up and hard to unravel, but whose publication in his lifetime tended to make him better known than other more silent explorers. It was in his letter to Lorenzo di Pierfrancesco di Medici especially that he spoke of the new world he had visited on the caravels of the King of Portugal. He also said that the land which they—that is the expedition of which he was a member—had discovered, seemed to them, not an island, but a continent. Furthermore he mentioned that they had sighted land 90 degrees of latitude distant from Lisbon—referring almost certainly to South Georgia in 52° south latitude whilst Lisbon is in 38° north latitude—and thus had measured the fourth part of the globe.

Martin Waldseemüller, an armchair geographer residing at Saint Dié in the Vosges mountains, became impressed with these statements of Amerigo. In 1507 he published a booklet in which he suggested that since Amerigo had discovered a *Novus Mundus* or fourth part of the world, therefore it should be called after him. With the book, he brought out a world map, on which he placed the name America on the lands south of the Equator visited by Amerigo.⁷ Undoubtedly he took an exaggerated view of Amerigo's reports. He passed over Columbus and Amerigo's even now unknown commander and looked on Amerigo as the discoverer of this New World. But barring this error he located the name America correctly on his map on what is now Brazil.

There is no evidence that Amerigo ever heard of the name America. Nevertheless because of it he has been abused like a pick-

⁷ Basil H. Soulsby, "The First Map Containing the Name America," *The Geographical Journal*, Vol. XIX., Feb., 1902.

pocket and has been accused of stealing the glory which should belong to Columbus. But all the evidence shows Amerigo guiltless of aught except of being a member of several important voyages of exploration and of writing somewhat hazily about them. And equally, barring the error in regard to Amerigo's commander, there was every reason why Waldseemüller should name the new land America. For remember he did not impinge on the discoveries of Columbus: he applied the name America only to the coast of Brazil, where it should still be. It was only years after all the actors in the matter were dead, that the name gradually became attached to the entire continent. Having myself named the two halves of the Antarctic Continent, West Antarctica and East Antarctica, and also some parts of it such as Charcot Land and Nordenskjöld Land, personally I have the deepest fellow feeling for Waldseemüller.

Occasionally some mystery is cleared up. For instance, in 1894 entirely private documents were discovered showing that Joao Fernandes Lavrador was one of the commanders of one or more expeditions sent to discover lands to the northwest of Europe between 1491 and 1496. This was probably the origin, formerly unknown, of the name of the part of North America which we call Labrador.⁸

More often, mysteries are not cleared up. For instance the map of Juan de la Cosa of 1500 shows a coast line extending from Newfoundland to Florida which must be the coast of the United States. The maps of Cantino and of Canerio of 1502 show the southern part of the coast between Florida and about New York, then a blank, then Newfoundland. Apparently two navigators had explored the coast roughly before 1502 but who were they? John Cabot, possibly was the first and Amerigo is sometimes guessed to be the second culprit. But no one knows!

There are some curious mysteries connected with Magellan's voyage. One is the statement of Antonio Pigafetta that when Magellan's expedition arrived at the north of the straits so well named after him: "all the men were so assured that these straits had no opening to the west, that no one would have thought of

⁸ Batalha-Reis, *The Geographical Journal*, February, 1897.

seeking it, except for the great knowledge of the Captain-general [Magellan]. This man, as clever as he was brave, knew that one must pass through a strait very hidden, but which he had seen marked on a map made by Martin Behaim, a most excellent cosmographer, which the King of Portugal kept in his treasury." The other strange occurrence is that the same year that Magellan sailed through the straits, Johannes Schöner made his famous globe, now in Nüremberg, showing South America much in its real shape, although extending only to 40 degrees south latitude. Pigafetta's statement and Schöner's map are not satisfactorily explained as yet. Perhaps they never will be!

One more unexplained cartographical mystery and I have done. Straits under the name of Fretum Anian appear as a water separation between Asia and America on Zaltieri's chart of the year 1566, almost exactly in the position of Bering Straits explored by Vitus Bering in 1728. And from 1566 on they hold their own on charts and atlases, varying their location a little each time until after the year 1700. If one looks at one of these old charts it is hard to believe that some one had not explored Bering Straits before 1566. And yet not only is there no record of any such voyage, but all the evidence which there is goes to show that there was no such voyage.⁹ The only solution of this mystery would seem to be native reports of these straits filtering through to the Chinese and being communicated by them to some early European traveler. But there is no record of anything of the kind. Nevertheless although the known evidence seems to prove that Bering was the first to sail through Bering Straits, the fact remains that more than a century and a half before Bering, some cartographer appears to have found out that wide straits separated the Asiatic and American continents.

There are many other unexplained occurrences connected with the evolution of American discovery which are not touched on in this paper. But this paper is not an attempt to give a complete history of the subject. It is rather an attempt to get at the philosophy of the matter; of the causes which led to the discovery;

⁹ F. A. Golder, "Russian Expansion on the Pacific," 1914.

of its long, slow and gradual development; and of our lack of knowledge about any number of its incidents. And I hope I have carried out my main purpose, which is to show that the discovery of America is not in the least the single occurrence it is popularly supposed to be, but that it is an evolution, and an evolution tinged throughout with mystery.